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ABSTRACT

An action research project described a program for improving prerequisite reading skills. The targeted population included students in a special education kindergarten and an at-risk first grade from declining urban schools located in a medium sized Midwestern city; and students in an at-risk prekindergarten program from a nearby middle class community. The problem of inadequate pre-reading skills was documented by test scores, teacher checklists, and early screening tools. Analysis of probable cause data revealed several contributing factors. Negative environmental factors were influencing the children's ability to learn. Inadequate teaching approaches were not meeting individual learning styles. Poor development of speech sound awareness at an early age was leading to reading difficulties. A review of solution strategies as suggested by educational literature and other professional sources resulted in the following interventions: explicit training in phonemic awareness, incorporating activities to address a variety of learning styles, and providing a climate conducive to learning using the best practices of whole language and phonics instruction. Post-intervention data indicated an increase in phonemic awareness skills including rhyming, word perception, letter identification, sound/letter association, and blending and segmenting. (Contains 38 references, and eight tables and three figures of data. Appendixes contain assessments, checklists, surveys, intervention schedules, a sample lesson plan, hand signals, and intervention activities.) (Author/RS)

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ED 420 049

HEAR IT, FEEL IT, SEE IT : IMPROVING EARLY READING ACQUISITION THROUGH A MULTISENSORY PHONEMIC AWARENESS APPROACH

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ABSTRACT

This report described an approach to improve prerequisite reading skills. The targeted population included students in a special education kindergarten and an at-risk first grade from declining urban schools located in a medium sized Midwestern city; and students in an at-risk prekindergarten program from a nearby middle class community. The problem of inadequate pre-reading skills was documented by test scores, teacher checklists, and early screening tools.

Analysis of probable cause data revealed several contributing factors. Negative environmental factors were influencing the child's ability to learn. Inadequate teaching approaches were not meeting individual learning styles. Poor development of speech sound awareness at an early age was leading to reading difficulties.

A review of the solution strategies as suggested by educational literature and other professional sources, resulted in the following interventions: Explicit training in phonemic awareness, incorporating activities to address a variety of learning styles, and providing a climate conducive to learning using the best practices of whole language and phonics instruction.

Postintervention data indicated an increase in phonemic awareness skills including rhyming, word perception, letter identification, sound/letter association, and blending and segmenting.

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CHAPTER I

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The students of the targeted at-risk prekindergarten, special education kindergarten, and at-risk first grade classes have shown deficiencies in the development of essential prerequisite reading skills including letter/sound associations. As a result, many students will lack the strategies necessary to decode unknown words causing them to be inefficient readers. Evidence of the problem is documented by test scores and teacher observation.

Immediate Problem Context

Research is being conducted in three sites. They will be identified as Schools A, B, and C.

School A Description

School A is in a small town located in the Midwest. One building serves students from prekindergarten through fourth grade in the district. The current building was established in 1950 after a fire destroyed the original school. To meet the needs of a growing enrollment, room additions were made in 1952, 1954, 1960, and 1970. There are 410 elementary students presently enrolled. To meet the needs of working parents, a

latchkey program was initiated in 1996. This program, sponsored by the school, employs noncertified personnel to provide child care before school from 6:30 to 8:30 a.m. and after school until 5:30 p.m.

According to the 1996 School Report Card, the ethnic background of the student body is 96.1% White, 1.7% Hispanic, 1.7% Asian/Pacific Islander, and 0.5% Black. Attendance is rated at 97% and student mobility is 16.4%. Students from low-income families number 7.8% of the student body. There are 0.5% students with limited English proficiency. The per pupil expenditure is $3,509, which rates significantly lower than the state average.

The targeted school employs 46 staff members to provide quality education and support. All staff members are Caucasian with 87.2% being female and 12.8% male. The teaching staff averages 12.5 years of experience and 13.6% of the teachers hold a master's degree. The average teacher's salary is $31,166 while administrative salaries average $62,333 (School Report Card, 1996).

The average class size in the elementary building is 20 students. There are four sections of each grade level for K-4 students. The kindergarten classes meet for half day sessions. There is at least one inclusion class at each grade level with three special education teachers and three aides employed to meet student and classroom needs. Additionally, a Title I reading program is available. A speech therapist, social worker, counselor, and psychologist also provide services to the school.

The school is committed to creating an environment that encourages each child to reach his or her potential by experiencing learning through a variety of programs and learning styles. Classroom instruction includes activities that promote problem solving

skills, critical thinking, and hands on experiences. Physical education classes are provided daily. There is instruction in art and music at all grade levels and the students go to the library once a week. Each classroom is equipped with four computers with access to the internet. Life skills and traditional values are taught through a special program developed by the school counselor. Students are involved in activities and lessons to develop an understanding of responsibility, good decision making, respect for self and others, and honesty.

Preschoolers in the district are served through an early intervention program which is administered by the special education association. Two half day sessions are offered. One session is provided for children eligible for early childhood special education. The other session is a state grant funded program to provide services for preschoolers at risk. The program employs a teacher and full time assistant. Support services include speech therapy and social work. Additionally, occupational and physical therapy are available for the early childhood students. A lending library and parent education classes are offered through the program.

As in the primary grades, the preschool classroom provides a program that encourages children to be actively involved in their learning. The classroom curriculum provides a balance of child directed and teacher chosen activities. The children are encouraged to work in the learning centers of their choice while the adults act as facilitators and join in their play or projects. During group activities, the children participate in music and movement activities, language activities, and stories. Small group time is provided to work on more specific skill development. The curriculum is

strongly language based, but all areas of development are addressed through activities that meet a variety of learning styles.

Community A Description

The Midwest community is in a rural setting with a population of 4,033. The residents are 99% Caucasian, many of German descent. The community is in close proximity to a midsized city with easy access to opportunities and services. The nearby city provides larger educational and cultural facilities: a publicly funded junior college, a private university, three large scale hospitals, a school of medicine, a civic center and theater, a museum, and a variety of retail stores. The city is located near a large river and has a well developed park system, bike trails, and professional sports teams which offer residents a variety of recreational opportunities.

The community itself has a few small local businesses and retail stores, and has recently experienced a growth spurt. A small branch bank, a primary health care center, and a large grocery store were built recently, and small strip mall is being completed. However, most residents travel to the nearby city for employment. Information from the Village Clerk indicated that the median household income is $50,728. Of the 4,000 residents in this community, about one fourth of the people hold a college degree.

The village operates under the supervision of a mayor and a town council. Volunteer fire and rescue services are available. There is one public grade school and one public middle school for the district that covers eight square miles. The middle school is one of four feeder schools for the high school which is located in a nearby village. The schools are a focal point of community life. They provide fields and gyms for an extensive community athletic association. Rooms in the buildings are used for

club meetings, family nights, a church service, and fund raising events. Besides the latchkey program in the elementary building, there are two daycare centers in the community, and a private nursery school program for three and four year old children. Worshipers can choose from seven local churches of different denominations located in the community.

School B Description

School B is located in a medium size Midwestern city and is situated in the center of one of the city's largest federal housing complexes. It is designated as a Title I School.

The building is a three story brick structure which features a staged gymnasium which also serves as the cafeteria. An addition to the school was built in the 1950's to provide more classrooms for the growing community. During the oil embargo of the 1970's, most of the windows were closed off to conserve energy giving the exterior of the building an austere appearance. In the early 1990's, the interior of the building was freshly painted. Murals on the walls depicting story book scenes and characters can be found throughout the hallways and add to the appealing appearance of the interior of the building. Two computer labs originally established to implement the Writing to Read Program now serve the students daily in kindergarten and first grade. A new lab with updated computers and staffed by part time teacher provides students in second through fourth grades learning opportunities not available to them at home.

The total enrollment in the school is 442 students. The racial ethnic background of these students is 93.9% Black, 5.7% White, and .05% Hispanic. Low-income students account for 97.7% of the total population and 0.2% of the students are identified as being

limited English proficient. Student attendance rate is 92.9% while the rate of mobility of students is 63.8%. Chronic truancy is 2.4% with chronic truants numbering 10. The average class size is 23 students at the kindergarten level and 20 each in grades one and three (School Report Card, 1996).

The school serves prekindergarten through fourth grade, and it is one of 14 primary schools in the unit district. According to the classroom roster, there are two sections of prekindergarten, four sections each of kindergarten and first grade, three sections of second and third grade, and two sections of fourth grade. In addition, there are three self-contained special education classes, one special education resource class, two sections of early childhood special education, and one special education inclusion class at the kindergarten level.

The school employs 56 people to provide instructional support to its students. Twenty four certified staff are classroom teachers. Other certified staff include a speech and language pathologist, one physical education teacher and one music/computer teacher. Five teacher aides provide classroom assistance in the special education and prekindergarten classes. The office staff includes a principal, one and a half secretaries, and one home school facilitator. Additional support staff includes a librarian, a Room of Discovery aide, three Title I aides, three full time custodians and seven part time cafeteria employees. The school houses a pupil personnel services office which is comprised of two school psychologists, two social workers, one nurse, and one secretary. A federally funded program for adults wanting to obtain a general education diploma is offered at this site. This program meets during school hours Monday through Thursday and includes a child care component. Also housed in the school are two Head Start

classes. The racial ethnic background of all employees at the school is 73.3% White, and 26.7% Black. Female employees compose 94.6% of the staff and 5.4% are male.

The unique qualities of this site include a Room of Discovery which houses a multitude of learning materials providing students with a variety of hands on experiences each week. In addition to the school library, a resource room has books and learning materials available for check out to parents as well as teachers. The school operates an in school postal system to encourage student writing. Students are employed and carry out all post office duties.

Several after school activities provide students with various opportunities for participation. A girl scout troop and a 4-H club sponsored by the local Cooperative Extension office meet weekly as does Students in Free Enterprise, an economic program sponsored by the local university. The Boys and Girls Club from a nearby high school sponsors tutoring twice a week. Intramural basketball, an excellerated reading program, and drama club are offered throughout the year. In addition, parent volleyball games are held on Friday evenings during the winter months.

The site has three Adopt A School partners, one of which is the local civic center which provides free tickets to cultural events. The local Kiwanis and labor council provide various programs for the students throughout the year as well as being guest readers in the classrooms. As part of the school reading project, several trained and dedicated volunteers provide individual tutoring weekly to students in kindergarten and first grade.

The area surrounding this school is isolated from the city's businesses, medical services, and cultural activities. Businesses within walking distance of the school include

a beauty shop, a seasonal ice cream shop, a liquor store, and several taverns. A small grocery store recently opened adjacent to the school. Public transportation is available to residents in the area and a bus stop is located in front of the school.

School B targeted classroom consists of ten kindergarten students identified as educable mentally handicapped, language impaired or having another handicapping condition. These kindergarten students are included in a regular division kindergarten class approximately 60 to 75% of the day. The total number of students from both classes ranges from 30-35. The regular division and special education teachers, and the assistant, team teach in a variety of configurations throughout the day.

School C Description

School C is located in a medium sized city located in the Midwest. This school has approximately 305 students attending grades prekindergarten through fourth grade. The racial/ethnic background is 78% Black, 12.8% White, 7.9% Hispanic, and 1.3% Asian/Pacific Islander. The school has a 94.3% mobility rate which is based on the number of students who enroll in or transfer out of the school during the year. During the past school year 160 students moved out and 120 moved in. The average daily attendance is 90%. Chronic truancy is 4.9%. The number of chronic truants is 14. Approximately one third of the students have been retained at least one time (School Report Card, 1996). School C has consistently fallen in their state test scores. The high mobility and retention rates have contributed to the students' low reading and comprehension scores.

There are 40 full time and part time teaching personnel who have an average of 18 years of teaching experience. Approximately 35% have graduate degrees, and 30%

are in the process of obtaining a graduate degree. Part time staff include art, music, and physical education teachers, four reading tutors, and a home school facilitator. The principal is completing his fifth year at this school.

School C is one of fourteen primary schools in the district. The school is comprised of two buildings which are separated by a closed street. The older building serves second through fourth grades and dates back to 1898. In 1916, five rooms and an auditorium were added to this structure. This building is architecturally significant and is referenced in the local pictorial history books. The other structure, built in 1963, houses two preschool classes, three sections of kindergarten, two sections of first grade, and one enriched class. Special education classes include a combined first and second grade class and a combined third and fourth grade class. The average class size is 20 with a 23 to 1 student to teacher ratio.

Low income students account for 99% of the population in School C which qualifies them to receive free or reduced priced breakfast and lunch. There are 3.9% limited English proficient students in the total school population. (School Report Card, 1996).

The Adopt A School partners have become actively involved with Site C School. Lunches are awarded for those students who have answered the Brain Teaser questions correctly. Donations are given during the holidays. Volunteers actively listen to students read, and act as mentors. A neighborhood church also involves its members with mentoring services.

Student support services include a Book and Bear Buddy Reading Program, an after school study club, social work counseling, C.O.O.L. and B.R.I.T.E. self-esteem programs, and T.A.R.G.E.T. tutoring.

Student recognition and incentives include honor roll and perfect attendance certificates, B.U.G. (Bring Up Grades) Club, and Friday Surprise for those students with good behavior. Students earn Good Behavior Bucks to use in the school store. Staff members also distribute Caught Being Good Coupons. On Mondays, a child from each class is recognized as Student of the Week. A Girl Scout troop and a 4-H club meet after school each week to provide further ways to build self-esteem and social values within many of the students.

Parent involvement opportunities include a federally funded Family Literacy Class, G.E.D. Classes, a Parenting for Success Class, a S.T.A.R. program which serves three and four year olds and their parents. A Family Support Team is available to counsel families of troubled children. Parents are invited to participate in the PTO, and bi-monthly coffee breaks with the principal.

The school obtained a Project Success Grant to provide training for students and staff in conflict resolution. Students are trained to be peer mediators and resolve conflicts which may occur in the lunch room, on the playground, and in the classroom. An Urban Education Grant allowed School C to try a new reading program two years ago called "Success For All." The goal of this program is to improve reading and comprehension skills. The "Success For All" reading program was chosen because it has proven to be effective in improving the reading skills of low-income students. School C also targeted a Student Achievement Plan which included seven problems, the causes of

the problems, the solution to the problems, and the manner in which success will be evaluated.

The neighborhood surrounding this site includes older homes, rental units within these homes, a public housing project, and some commercial development. Two temporary housing shelters for the homeless are found within the attendance boundaries of the school. Students live within walking distance of the school and one bus transports special education students. The neighborhood is plagued by a high crime rate, exposing many students to violence, gang, and drug behavior.

Community B and C Description

Schools B and C are located in the same unit school district. This district is home to four high schools, twelve middle schools, fourteen primary schools, one middle school for the gifted, one magnet school for the arts, and an Early Childhood Center. As stated in the most recent District Report Card total enrollment in the district is 15,803. The students racial ethnic background is 49.4% Black, 46.9% White, 1.8% Hispanic, 1.8% Asian, and .1% Native American. The number of students from low-income households is 53.9% and 1.5% are limited English proficient. Student attendance rate is 91.8% while the mobility rate is 33%. The high school dropout rate is 14.6%. Chronic truants number 1,042 which accounts for 6.9% of the student population. Reported parental involvement is 89.2%.

The district employs 1,029 teachers, 76.6% female and 23.4% male. Ninety-two percent of the teachers are White, 7.0% are Black, 0.4% Hispanic, 0.4% Asian, and 0.1% Native American. The teaching staff averages 14.5 years of experience, and 54.4% have a bachelor's degree while 45.5% hold a master's degree or above. The pupil teacher

ratio at the elementary level is 19.8:1 and 17.5:1 at the secondary level. Pupil administrator ratio is 232.2:1. The average teacher in the district earns $35,427 while the average administrator earns $60,115. The district spends $5,860 per year to educate each student. The high school graduation rate is 72.2 and the average composite score of all students taking the ACT is 21.3 (School Report Card, 1996).

The Midwestern community this district serves is located 175 miles south west of one of the largest metropolitan areas in the United States. It is adjacent to a major waterway and has a population of 112,900. According to the Economic Development Council, the city is the home of one private university, one junior college, a vocational school, and one medical school. The health needs of the community are met by three major hospitals, a mental health center, and a Health Education Center.

Cultural and recreational opportunities are abundant throughout the area. The community supports a museum of the arts and sciences, a ballet, an opera company, a municipal band, a symphony orchestra, two theater groups, and a Civic Center Theater and auditorium which seats 12,000 people. The city is home to two professional sports franchises. The recreational pursuits enjoyed in the area are a riverboat casino, 10 public and private golf courses, a zoo, a planetarium, an indoor ice rink, a sports complex and 12,000 acres of parks.

Communication to the area is supplied by one daily newspaper, several radio stations, and local affiliates of the four major television stations. The city has interstate access and a regional airport.

The most recent census data states the per capita income in the city as $14,039 and the median income in all households is $26,074. Of all families with children under 18 years old, 25% live below the poverty level.

Recently, the school district and the community leaders proposed a year-round school plan to be funded through an increase in city sales taxes. This met with strong opposition from the business community as well as the general public. A leadership change in the city government has delayed any further discussion on the issue.

National Context of the Problem

Our schools are encountering growing numbers of children who lack adequate reading skills. If children in our society do not learn to read, their success in life is limited. (MacRae-Campbell, 1995). Evidence of reading difficulties is shown from the studies by the National Assessment of Educational Progress (NAEP, 1995). They found that in students from 39 states across the country, fewer than one third were proficient in reading and only 2-5% were reading at advanced levels.

According to Adams (1990), many children lack the basic awareness of print and its relationship to reading when they enter school, and have had little experience with books.

> Research indicates that many children approach school with very little print knowledge. They don't know what a letter or a word is, much less how to read one. They don't know that print reads left to right, much less that it contains words and sentences. They don't know the front from the back of a book, much less that its print is meant to convey meaning. (p.59.)

Lack of awareness of print in prereaders, results in poor motivation and skills to develop reading. In a study by Gaskins et al. (1997), several first grade children who had failed in their attempts to learn to read, had not made discoveries about how our written language works. These students had not devised strategies for learning words that were reliable or efficient. Though these poor readers came from the same literacy rich background as their classmates, they could not read familiar words accurately and rapidly like the good readers. According to Bergman and Schuder (1993), one of education's most trying problems is how to provide for the growing number of students who have not learned to read successfully under traditional instruction. Each year problems increase as the system fails to meet the reading needs of these students.

Stanovich (as cited in American Educator, 1995) indicates that parents are looking for alternatives to public education (e.g. private schools, home schooling), and questioning the efforts of the public school system. The controversy over whole language instruction versus more traditional reading instruction including phonics, has been debated for several years. Drawing the best from both approaches will create a well balanced program that will meet the needs of all children beginning the reading process.

Reading is a basic life skill. Liberman and Liberman (1995) suggest that poor reading skills result in the poor development of vocabulary, grammar, memory, and comprehension. Lack of good reading skills inhibits the child's motivation to read and delays the development of metacognitive strategies for reading. Anderson et al.(1985, p.1) describes reading as a "cornerstone for a child's success in school and throughout life." Without the ability to read well, opportunities for personal fulfillment and job

success are lost, and the impact affects the whole nation. Anderson et al.(1985) conclude:

> While the country receives a good return on investment in education at all levels from nursery school and kindergarten through college, the research reveals that the returns are highest from the early years of schooling when children are first learning to read. (p.1)

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

Documentation was obtained using a variety of data collection instruments. Sawyer's Test of Awareness of Language Segments (TALS) (Appendix A) was used to assess the students ability to segment spoken language into words, syllables, and phonemes. To supplement the TALS, the Student Pre-Reading Behavior Checklist (Appendix A) was developed to assess preliteracy skill including book orientation, rhyming, letter identification, and letter/sound recognition. Parents were asked to complete the Reading at Home Survey (Appendix A) to give the researchers information about the students' literacy experiences before entering school. Additionally, parents were invited to complete the How Does Your Child Learn? questionnaire (Appendix A) to indicate their child's learning style.

Sawyer's Test of Awareness of Language Segments (TALS) was administered to students in the prekindergarten class who were four years six months and older. Four of the twelve children were old enough to test. No assessment tool was found for the younger students. The results of the TALS were compared to the performance criteria for

students just before or immediately after entering kindergarten. Three of the four students fell in the average range while the other student scored in the low range.

All 12 of the prekindergarten students were screened on the Pre-Reading Student Observation Checklist. Every student demonstrated appropriate book orientation. Seven of the students looked left to right as they turned the pages of a book. Nine students looked at the right page first. Seven students described pictures, actions or both as they looked through a familiar book. Five students were able to retell a familiar story by looking at the pictures and used voice inflections for the characters.

Nine of the twelve students did not yet show an understanding of rhyming. Three of the twelve students could identify two rhyming words from a group of three. Most of the students knew some upper and lower case letters. The following chart demonstrates their knowledge of letters.

Table 2.1

Percentage of Prekindergarten Students that Recognized Upper and Lower Case Letters.

	0	1-5	5-10	10-15	15-20	20-26
Upper case	17%	17%	25%	0	8%	33%
Lower case	25%	25%	8%	8%	25%	8%

All of the Reading at Home Surveys were returned by parents of the prekindergarten students. According to the results, 83% of the parents read to their children each day and 17% read two to three times a week. Every home has 20 or more books and eight families visit the library often. By report, eight of the children ask to be read to often, seven children enjoy looking at books alone, and all the children talk about the pictures in a book. Nine of the children recognize familiar words like K-Mart or

McDonald's. According the parents, all of their children experiment with drawing by scribbling. Ten of the children draw representations and describe them and all but one child attempt to write their names.

The questionnaire, How Does Your Child Learn?, was used with parents to assess the learning styles of the students. Parents were asked to respond to 10 statements by ranking their child from most to least according to three descriptions. When tallied the results indicate the parent's perception of their child's learning style as visual, auditory, or kinesthetic. If a child's score was equal, or within two points of each other, in two learning styles, it was considered by the researcher as a combined learning style. Eleven of the twelve parents of the prekindergarten students responded. A summary of the results follows.

Table 2.2

Results of Prekindergarten How Does Your Child Learn? Questionnaire.

Visual	Auditory	Kinesthetic	Auditory/Kinesthetic
2	0	3	4

Auditory/Visual	Visual/Kinesthetic
1	1

All (10) of the kindergarten special education students screened on the TALS were five years, seven months and older and scored between 0-11. This placed them in the low performance category when compared to students taking the TALS just before or immediately after entering kindergarten. According to the performance criteria, ten to twenty-five percent of students fall into this category.

Part B of the screening is designed to observe the student's ability to identify parts (syllables) within single words and is optional in scoring for students five years seven months and older. This part of the screening was administered to the students for diagnostic purposes but was not counted in the final score. Of the ten possible earned points in Section B, 40% of the students earned 0 points and 60% earned 5-10 points.

The Pre-Reading Student Checklist indicated the great majority of kindergarten students named very few letters of the alphabet as indicated in the chart that follows.

Table 2.3

Percentage of Kindergarten Students that Named Upper and Lower Case Letters.

	0	1-5	5-10	10-15	15-20	20-26
Upper case	50%	30%	10%	0	10%	0
Lower case	50%	40%	10%	0	0	0

None of the students could identify any sound/letter correspondences. Forty percent of the students said a number when shown a letter. All students were able to hold a book upright and turn pages front to back indicating some familiarity with books. However, 7 of 10 students described pictures in a book but were not able to tell a story. Additionally, few students demonstrated an understanding of the concept of rhyming words. None of the students could create a rhyming word for a given word, and 60% were unable to identify two rhyming words from a group of three.

One hundred percent of the Reading at Home Surveys were completed by the parents of the kindergarten students and returned to school. The results of the surveys indicated that 80% of the students are read to two to three times a week. Fifty percent of the students have 10 to 20 children's books in their home and 30% have more than 20.

Sixty percent of the parents reported that their children looked at a book by themselves often and 100% of the children talk about the pictures in a book. Twenty percent of the parents reported never going to the library and 70% reported they sometimes take their child to the library.

All parents of the kindergarten students returned the How Does Your Child Learn? questionnaire. Of the 10, six were rated rather than ranked and could not be evaluated. One survey was returned twice not completed but signed by the parent. The three remaining were ranked as requested, and indicated that two students were highly visual learners and one was a strong kinesthetic learner.

The TALS was given to 18 six and seven year old first grade students. Twenty percent of the students scored in the high range category. This indicated that these students were ready for basal reading instruction. Twenty percent of the students tested in the average range and were approaching readiness for formal reading instruction. Sixty percent of the students scored between 0 and 18 showing they lacked the readiness skills necessary for basal reading instruction.

The Pre-Reading Student Behavior Checklist indicated that all of the first grade students were familiar with books and how to use them. All students were able to tell a story from the pictures. Twelve percent of the students were unable to identify rhyming words in a group of words. Fifty percent of the students were unable to create a rhyming word for a given word. All 18 students identified both upper and lower case letters. The following chart indicates the students' knowledge of letter/sound associations.

Table 2.4

Percentage of First Grade Students that Named Upper and Lower Case Letters.

	1-5	5-10	10-15	15-20	20-26
Letter/sounds	0	0	10%	30%	60%

Thirty five percent of the first grade students brought back their Reading At Home Surveys. Answers throughout the surveys were very similar. Results indicated that parents read to their children often, had 20 or more books at home, and took their children to the library sometimes. Parents observed their children describing pictures in books and reported that their children recognized familiar words in the environment. All of the children could write their names.

Seven of the eighteen first grade students returned the How Does Your Child Learn? questionnaire. Of the questionnaires returned, one was rated rather than ranked and could not be evaluated. The results of the other questionnaires are indicated below.

Table 2.5

Results of First Grade How Does Your Child Learn? Questionnaire.

Visual	Auditory/Kinesthetic	Auditory/Visual
2	2	2

In summary, baseline data indicates a great majority of the students participating in this study do not possess the prerequisite skills necessary for beginning reading instruction. While the returned surveys indicated that the students had prior reading and literacy experiences at home, evidence suggests that this exposure was not adequate to prepare these students for beginning reading.

Probable Causes

Students who have not acquired the necessary phonemic awareness skills are at risk for reading failure. Other causes include stressful home environments, lack of appropriate language experiences, inadequate teaching approaches, and the failure to recognize and address learning styles of individual students.

Garbarino (1997, p.15) states, "At present about one in five of all U.S. children, and two in five among children age six and under, live below the officially defined poverty line." While not all students living in poverty experience at-risk conditions, socioeconomic status is a strong predictor of reading success or failure. However, no one factor is the sole cause of poor literacy development (Cronan et.al.,1996).

Many of the students targeted for this study live in areas of the community where there is much poverty, violence, and disruption in family relationships. Garbarino (1997, p.13) describes these as "socially toxic environments." These environments put pressure on parents and children. Many are unsafe and can threaten a child's sense of security.

Recent brain research proves that an environment which is stressful, anxious, and frustrating with repeated failures causes "downshifting" of blood flow in the brain. This downshifting prohibits the blood from traveling to the neo-cortex of the brain where learning occurs and has a negative effect on the growth and development of the brain (Beamish, 1995). This physiological cause is a direct result of a socially toxic environment.

The importance of parent child interaction in the early years has a profound effect on the neuro development of a child's brain. Recent research has disproved the theory that a baby's brain structure is fully formed at birth. Prenatal development includes only

brain stem level functioning with the rest of the neuro-circuits developing postnatally. (Begley, 1997). Additionally, as studied by Kuhl, (as cited in Begley, 1997, p. 30), "auditory maps" of the brain are developed in the first 12 months. The brain's response to specific phonemes allows the child to develop a map of speech sounds. The lack of stimulation at this crucial time will cause inadequate language development which in turn will be detrimental to a child's ability to acquire fundamental reading skills.

Reading is language based (Adams & Bruck, 1995). Therefore, students from poorly developed language backgrounds are at risk of reading failure. In addition, children who have had little or no attention brought to print in their environment will have difficulty linking language to the printed word. The lack of familiarity with the letters of the alphabet is a strong indicator of failure in learning to read. An even stronger predictor is the child's level of phonemic awareness on entering school (Adams, 1990). Goodman (as cited in Juel, 1991), believes that the roots of literacy develop well before a child enters school. Therefore, the experiences a child has before coming to school can positively or negatively impact their learning.

Once a child enters school, the education system takes on the primary responsibility for teaching children to read. Within the system, the controversy between the phonics and whole language approaches to reading has been debated. Whole language theorists believe that learning to read is as innate as learning to talk (Adams & Bruck, 1995; Sweet, 1997). According to Levine (1994, p.38) one of their central beliefs is that "language should be learned from whole to part, with word recognition skills being picked up by the child in the context of actual reading." Goodman (as cited in

Adams & Bruck, 1995) explains that this approach excludes the explicit instruction of sound/letter correspondence and emphasizes meaning and purpose.

We, as teachers, have observed that many children, who come from homes with inadequate parent child interactions, experience much of their language through television, videos, and radio. These students enter the system ill prepared to acquire pre-reading skills strictly through a print rich environment. "Exposure alone is never sufficient" (Adams & Bruck, 1995, p.12). These children need special guidance in learning to acquire insights and observations that are necessary to make sound/letter associations.

Another probable cause of early reading failure, is the fact that school systems teach, test, and reward linguistic and logical/mathematical intelligences (Gardner as cited in MacRae-Campbell, 1995). Each student is unique and enters school with his or her own individual and varied gifts and experiences. Despite this, many teachers do not recognize or take into consideration the various learning styles of students when they plan their teaching approaches.

Reiff (1992) reports that teachers favor students who have learning styles similar to their own, and that if a student's learning style is dramatically different from the teaching style, the possibility exists that the student could be mislabeled as slow, learning disabled, or hyperactive. Many students who are poor readers are tactile/kinesthetic learners (MacRae-Campbell, 1995; Reiff, 1992). Carbo (1996, p.12.) says, "The problem is that different reading methods and materials demand different reading strengths of the learner." When there is a mismatch between the students learning style and teaching approach, the instruction will impede the student's reading progress. If the

education system continues to ignore or refuse to accommodate and plan for individual learning styles and intelligences, then it will continue to fail to tap the learning potential of many students.

There are students entering school who do not have the necessary prerequisite skills for reading acquisition. Research has confirmed that the socioeconomic and cultural backgrounds of the students can put them at risk for reading failure. The question these researchers intend to study is whether a change in teaching approaches and strategies can positively impact the reading potential of these children.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

Historically, reading has been taught using the alphabetic method. Noah Webster's Blue Back Spellers, which included phonetic word lists, introduced phonics into beginning reading instruction. However in the 1800's educators began using the whole-word method. This approach required children to memorize entire words rather than analyze the sounds within the words. Since that time there has been controversy about which approach is superior in teaching reading (Morrow & Tracy, 1997).

More recently, the debate between the whole language and the phonics approach to beginning reading has been the focus of much discussion. Whole language programs stress a whole to part process where learning to read is approached with the purpose of deriving meaning from print. These programs blend reading, writing, and speaking instruction and exclude the skill based approach found in basal reading programs. Students learn to read words then gradually make the connections between letters and sounds (MacRae-Campbell, 1995).

The whole language approach provides a learning environment that is child friendly because it is largely based upon immersing a child in a print rich environment,

allowing them to experience reading through literature, journals, dictated stories, experience charts, and invented spelling. Students benefit from the natural context of this approach. However, it can limit a student's reading success if the foundation necessary for learning letter/sound relationships has not been adequately developed.

A strong predictor of early reading success is a child's awareness or sensitivity to the sound structure of language (Stanovich as cited in Swank & Catts, 1994). This sensitivity is called phonemic awareness and is the foundation underlying the learning of sound and spelling correspondences. Phonemic awareness refers to the ability to hear and differentiate between the various words, sounds, and syllables in speech independently of meaning (Griffith & Olson, 1992; Butler & Routman, 1995). Phonemic awareness skills range from the recognition of rhyming words to more detailed understandings of blending and segmenting words into syllables and phonemic units.

Bradley and Bryant (as cited in Goswami, 1994; & Shaywitz, 1996) emphasize that phonological ability at the preschool level predicts future skill at reading. Research by Isabelle Liberman (as cited in Shaywitz, 1996), concludes that children become aware of the phonological structure of the spoken word between the ages of four and six. Studies by several researchers have shown that explicit training in phonological awareness, rather than general language instruction, significantly improves a student's ability to read (Shaywitz, 1996). The degree to which a child is able to manipulate sounds will predict early reading success or failure (Adams, 1990; & Kamhi, 1991).

Stanovich (as cited in Kamhi, 1991), found that the relationship between phonological awareness and reading is developmentally limited. A window of opportunity exists when children are beginning to acquire reading skills during which

facilitating phonemic awareness is important and influences reading ability. As children move into the later stages of reading where direct visual access of print predominates, phonological awareness no longer is the primary cause of differences in reading ability. Therefore it is crucial to provide phonological training at an early age.

Brain research indicates that different parts of the brain are used for different mental functions (MacRae-Campbell, 1995). Dr. Jane Healy (as cited in MacRae-Campbell, 1995), author of Your Child's Growing Mind, explains:

> For most people, the right hemisphere of the brain learns by looking and getting the whole intuitive "feel" of a situation, while the left tends to listen and analyze systematically. The right sees outlines and wholes, while the left arranges the details in order. The right is a simultaneous "lumper," the left a sequential "splitter." (p.5)

Evidence strongly suggests that students do not learn using only one side of their brain. However, blood flow to each side of the brain is not symmetric in many people, making one hemisphere more aroused than the other. Jerre Levy, associate professor at the University of Chicago, (as cited in MacRae-Campbell, 1995, p.6), states that "children with a biased arousal of the left hemisphere may gain reading skills more easily through a phonetic, analytic method while the child with a biased arousal of the right hemisphere may learn better by the sight method." Levy suggests that our aim in education should be to assure that children taught to use the phonics approach develop sight word skills, and that those who learn through a whole word method, develop the phonic skills necessary for decoding (MacRae-Campbell, 1995).

Learning modalities are the sensory channels or pathways through which individuals give, receive, and store information (Reiff, 1992). Visual learners are students who learn by seeing. Auditory learners need to hear what they are learning. And tactile/kinesthetic learners need to touch, feel, and move to learn. Students can have the same intellectual capabilities, but differ in their ability to use information and the way they process material. For learning to be rewarding as well as successful, teachers need to gain information and modify practices that will accommodate students' most efficient learning channel (Barbe, 1988). Barbe (1988), found that in an average classroom, a teacher can expect that 30% of the students will be visual, 25% will be auditory, and 15% will be kinesthetic. The remaining 30% will have mixed modality strengths. Because of differences in modality strengths and the fact that this study focuses on young children, it is apparent that a multisensory approach to teaching beginning reading skills is imperative.

MacRae-Campbell (1995, p. 21) says that, "All students at all ability levels can be taught but what is required are new teaching skills." In her research, Adams (1990), found that though phonics was essential in the development of successful reading and writing, students must also be taught to read for purpose and meaning. Using an approach that emphasizes phonemic awareness to develop preliteracy skills, will provide a framework for students to develop the necessary readiness skills for reading. And by embedding phonemic awareness in meaningful contexts, students can learn about print and acquire phonological skills during functional, holistic experiences (McGee, Poremba,

Richgels, 1996). Griffith and Olson (1992) state that

> Teachers can help children develop phonemic awareness in many ways. They can expose them to literature that plays with the sounds in language, they can provide extensive writing experiences, and they can provide explicit instruction in sound segmentation and in representing the sounds heard in words (p. 520).

Phonemic awareness can by taught through well planned activities in preschool through first grade. Though many of the activities may seem like enjoyable games to the children "they may bridge a critical gap between inadequate preparation for literacy learning and success in beginning reading." (Griffith & Olson, 1992, p.522). These authors emphasize, too, that phonemic awareness activities will be meaningless to the student unless they are used in a context of real reading and writing.

Knowing students as individuals is one of the keys in developing appropriate classroom instruction. In light of the research reviewed, integrating the best strategies from the whole language and the explicit approaches appears to be the logical choice to meet the needs of young children (Morrow & Tracey, 1997). This action research project chooses to focus on a combined approach to teaching reading, which emphasizes phonemic awareness and multiple modality strategies, and the impact it has on the students' development of reading acquisition skills.

The strategies planned for this research project are patterned after Joseph Torgeson and Brian Bryant's program entitled Phonological Awareness Training for Reading (1994). This program was implemented with a group of sixty kindergarten

children who, because of their lack of phonological awareness, were at risk for reading failure in first grade. It was intended to be used in small groups of 4 children.

In their ten week study the children were seen 4 times a week for twenty minutes. The lessons were divided into 4 sets of activities: warm-up (various rhyming activities), sound blending, sound segmenting, and reading and spelling. Using the strategies in this program, they found that the group receiving training were substantially ahead of the control group in both analytical and synthetic phonological awareness skills. Analytical skills are those that identify and locate phonemes with words. For example, "What is the first sound in cat?" The ability to blend individual sounds to form words were categorized as the synthetic skills.

While Torgeson's program was introduced to be used in small groups, these researchers have adapted materials and strategies so that the fundamental elements of the program can be used to teach a large group of children. Large robots were constructed resembling the familiar bean bag toss clowns. A hole was cut into the mouth of the robot so blended word pictures could be fed through it. Additionally, Velcro and a magnetic board were attached to hold picture cards and magnetic letters. (Appendix C)

At the prekindergarten level, instruction will continue using the whole language approach. An explicit phonemic awareness component to teach blending and segmenting of syllables in words, rhyming, and wordness will be incorporated. Texts that deal playfully with sounds, such as rhymes, alliteration (the repetition of an initial consonant sound across several words), and assonance (repetition of vowel sounds within words) will be utilized. Matching words and syllables to physical movements like clapping and

marching will allow the students to perceive the segments of speech. Hand signals will be used to introduce the sounds of several consonant letters. (Appendix B)

Kindergarten level themes will be developed around a consonant vowel consonant (cvc) word such as *nut, box, hat*. Blending and segmenting sounds in words through onset/rhyme, and eventually individual sounds, will be used to teach sound/letter correspondences. A bank of cvc words such as *nut, nap, net, bun, and ten* will not only allow students to hear sounds in isolation but will enable them to sequentially map sounds to letters, fostering decoding abilities. Hand signals will also be used at this level to teach the consonant and vowel sounds. These hand signals will be used in addition to visual and auditory stimuli of individual phonemes. This strategy will provide additional sensory input so children can encode and retrieve sound letter associations more readily. The students will not only hear and see but will also feel a sound (or sounds) in a word.

An explicit phonemic awareness component will be added to the previously established schoolwide Success for All Program at the first grade level. Review of sound/letter associations will incorporate blending and segmenting of cvc words using hand signals for each letter sounds. Analyzing the sounds in a word prior to viewing the word will be stressed.

Blending and segmenting sounds and syllables in words will be accomplished in each classroom using robot talk (Torgeson, 1994). The large, two dimensional robot described earlier will be used to add interest, motivation, and a playful component to the activities.

Project Objective and Components

As a result of the implementation of instructional strategies focusing on the awareness of the sounds of language and the relationship between speech and print during the period of September 1997 through January 1998, the targeted students will improve their prerequisite reading skills, as measured by a behavior checklist, teacher journals, and a test of phonemic awareness. In order to accomplish the project objective, the following processes are necessary.

1. Explicit instruction in speech sound awareness.
2. Activities that will meet the needs of student's learning styles.
3. Instruction in print awareness.

Project Action Plan

The action plan is presented in outline form listing strategies for each process identified. The teacher from each site will develop activities appropriate to the age level of the targeted students from these strategies. The action plan will begin with the collection of baseline data which will be completed by the end of September 1997. Children will be assessed on phonemic awareness skills and prereading readiness. The assessments will be administered again at the end of the implementation program to measure growth. Parents will be asked to complete surveys on reading habits at home and their child's learning styles. The purpose of the surveys is to gather information on the child's previous reading experiences, and their learning modality strengths and weaknesses.

Strategies Outline

1. Strategies for explicit instruction in speech/sound awareness.
    A. Environmental sounds.

B. Awareness of words in spoken and printed sentences.

C. Sound/letter association.

D. Blending syllables and phonemes in words.

E. Segmenting syllables and phonemes in words.

F. Sound play activities/ rhyming.

2. Strategies for activities to meet the needs of students' learning styles. (A-auditory, V-visual, K-kinesthetic.)

A. Hand signals for the sounds. (V, K)

B. Rhyming activities. (A)

C. Finger plays. (A, V, K)

D. Songs, chants. (A, K)

E. Magnetic letters. (V, K)

F. Robot (mascot for phonemic awareness) (A, V, K)

G. Picture cards. (V)

H. Word lists for bombardment of initial sounds. (A)

I. Charts. (V)

J. Tape recorded stories. (A)

K. Alphabet cards. (V)

L. Clapping to words/syllables. (A, K)

M. Graphic organizers. (V)

3. Strategies for instruction to increase print awareness.

A. Book orientation.

B. Listening appropriately to books as they are read.

C. Individual or paired reading time.

D. Answering comprehension questions about a story.

E. Recognizing familiar signs, logos, names, etc. in the environment.

F. Letter identification.

G. Dictating stories to a scribe.

Using print to record information (scribbling, letters, invented spelling, journals).

Methods of Assessment

The teachers will administer the Sawyer's Test of Awareness of Language Segments (TALS) (Appendix A) individually to each student during within the first three weeks of school.

The Pre-reading Student Behavior Checklist (Appendix A) will be used by all grade levels. Each teacher will observe the students and administer the checklist individually within the first three weeks of the school year.

Parent Surveys to be used by all grade levels:

1. How Does Your Child Learn? (Appendix A)

2. Reading at Home Survey (Appendix A)

The prekindergarten teacher will explain and distribute the surveys on initial home visits. The parents will be asked to return the completed surveys on orientation day. If the surveys are not returned, the teacher will hand out a second set of surveys at orientation, or she will make an appointment to meet with the parents to complete the survey.

The kindergarten and first grade teachers will send the surveys home with their students on the Tuesday after Labor Day and request that they be returned by Friday of that week. They will offer prizes for each of the children who bring back the surveys. If the surveys are not returned the first week, the teachers will send home a second set and request immediate response. If the parents do not respond to the second request, the teachers will request a parent conference during which they will complete the survey with parents.

In addition to these assessments and surveys, the teachers will record the vision and hearing screening results of each student.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to improve the students' prerequisite reading skills of the students. Strategies for explicit instruction in sound awareness, activities to meet the needs of students' learning styles, and approaches that emphasized print awareness were selected to improve these skills. A 20 week intervention was initiated in each of the three sites. Strategies were selected and implemented by the teacher researchers at age appropriate levels to meet the needs of each site.

Explicit instruction was used to provide a base for the development of phonemic awareness. The purpose of this instruction was to increase the students' sensitivity to the sound structure of language. Initially, the children were exposed to environmental sounds and taught to listen for similarities and differences in the sounds around them. Rules for listening during group meetings were established to increase attending and appropriate participation during instructional time. Lessons were then presented to teach sound and word awareness, sound/letter association, and blending and segmenting syllables and phonemes in words. Books, songs, and activities were used for sound play activities such as rhyme and alliteration.

In recognition of students' differences in learning styles, teaching approaches were multisensory to address auditory, visual, and kinesthetic learning modalities. Visually: charts, graphic organizers, word lists, picture and alphabet cards were used. Bombardment words, rhyming, and tape recorded stories were among the auditory activities. Kinesthetic channels were stimulated through multimodality activities such as clapping, magnetic letters, action songs and chants, finger plays, and hand signals for the letter sounds.

Finally, instruction to increase print awareness was integrated throughout the day through teachable moments, such as recognizing letters in familiar words, logos, signs, and classmates' names, as well as in planned lessons. During group story time, the students learned to use appropriate listening skills and to recall details from the story by answering questions. The students were given opportunities to dictate their own stories or experiences to a scribe or to write their own thoughts in journals and on drawings, using marks and lines, invented spelling, or real words, depending upon their developmental level.

In the prekindergarten classroom, explicit instruction occurred during the opening circle group meeting. Due to the age span from three to five years old, lessons were kept short with emphasis on prerequisite skills for prereadiness for reading. (Appendix B) During the first month of intervention, the children learned the chant Hickety Pickety (Appendix C) in which they said a name, whispered it, and clapped it. The Listening Walk by Paul Showers (1991) was used to inspire awareness of environmental sounds. Rachel the Robot was introduced and the children learned to recognize their names in robot talk (he-lo Ke-vin). Compound words were introduced by Rachel and the students

learned to clap the syllables and blend the robot words into one word. Rachel said "pan-cake" the children responded "pancake." Action rhymes and songs were sung every day.

In October, the teacher researcher began to introduce an individual letter along with a hand signal for its sound. One letter was introduced approximately every week, with some letters held over for short weeks. Picture cards for consonant vowel consonant (cvc) words with the letter's initial sound were used with the robot. First, the picture and words were introduced for the children to say each day. When the students learned the words, the pictures were attached to the robot with Velcro and the teacher researcher segmented a work in robot talk. The students would then blend the sounds to say the word as people would say it. At times, individual students would take turns coming up to listen to a robot word, blend it, then feed it to the robot. In all, eight letters were introduced to the students over the 20 week intervention period. Rhyming in poetry, songs, and books; blending and segmenting compound and multisyllable words; identifying letters in names, words, book titles, signs, etc.; writing charts and lists; and recording children's words and stories; were continued as the letters were introduced.

Twenty minutes per day were devoted to explicit phonemic awareness instruction in the kindergarten classroom. The beginning two weeks of school were devoted to a theme on the Five Senses as an introduction to sound awareness. During this time the robot was introduced and students were taught how to use it: first they heard an animal or environmental sound, such as a dog barking or a baby crying, and then they fed the corresponding picture to the robot. Eventually students blended and segmented compound and two and three syllable words in the same manner. Thereafter, each week a letter sound and corresponding hand signal were introduced within a theme. A

bombardment list of words having the targeted beginning sound was repeated and objects and pictures were named and displayed which had the beginning sound of the targeted letter.

Cvc picture cards having the same beginning sound such as *nut, net, nap, neck, and knocks* were attached to the robot. The teacher researcher would robot talk (segment) the cvc word using the hand signal, initially using onset/rhyme which segments only the initial consonant of a word (n-ut). Eventually three phonemes were segmented (n-u-t) and the students were asked to blend the sounds together and feed the picture card to the robot.

Continuant consonant phonemes, which can be stretched out when said in isolation, (M, F, N, S, W) were introduced first as they appeared to be easier to hear as well as blend and segment then noncontinuant phonemes. All consonants were taught in the initial position of the word. Vowels were taught in the medial position. (Appendix B)

A variety of rhyming games, songs and activities were enjoyed daily by the students. Throughout the day, words were clapped into syllables. Each week the students illustrated a book. These books used the targeted sound and topic in the text. Same words were circled in the same color and read to the teacher. These books were included in homework packets the following week to be read at home.

Cooperative learning lessons were planned toward the end of each week. These lessons consisted of sorting objects having the same beginning sound into tubs, constructing a web of pictures and deciding what sound they had in common, and sorting picture cards on a T chart. Additionally, groups of three students wearing letter vests, constructed words.

Letter names, sounds, and hand signals were reviewed daily during drills, beat the clock games as well as teachable moments. In all, thirteen sound/letter associations were introduced during the intervention. (Appendix B)

Phonemic awareness instruction in the first grade classroom was very similar to the techniques used in the kindergarten program. Project intervention strategies were implemented in addition to the Success For All Reading program already in place at the school.

Two letters along with the hand signals were introduced weekly. (Appendix B) Bombardment word lists of the targeted letter sound were presented along with the word lists created by the students. (Appendix C)

Daily blending and segmenting activities were used with the robot. Picture cards, object collections, rhyming games, Say-Spell-Say and Quick Erase (Appendix C) were among the strategies used to support phonemic awareness. These routine games developed auditory discrimination skills, letter name and letter/sound recognition, and sound blending.

Daily journals were kept by the first grade teacher as ongoing assessment of each student. The journal stressed positive aspects as well as areas where students had difficulties in reading and writing. This enabled the teacher to regroup students for further instruction and to plan future lessons.

When the research began in September, there were 12 students in the prekindergarten class. Seven more children were added to the class in October and two more joined the class in January. The addition of several more students effected the character of the intervention strategies. Less emphasis was placed upon individual

participation than was originally planned in order to maintain attention of the whole group.

Ten students were pretested in the kindergarten class. During the intervention one student moved and two students were added to the class in November. Intervention strategies were impacted by the behavior management needs of the new students. Additionally, the teaching assistant in the classroom was transferred in December and the new assistant was unfamiliar with classroom routine and management.

Several students moved in and out of the first grade class during the intervention period. Only nine of the original 18 pretested still remained at posttesting time. The high mobility rate, typical at this site, had an unknown effect on the success of the intervention.

There were a total of 30 students that were stable during the research project. New students to the classroom were included in the intervention, but were not assessed.

Teacher researchers kept weekly journals to describe the lessons and activities and as an evaluation and reflection tool. Checklists were used periodically by the individual teacher researcher to assess students' progress. (Appendix A)

Presentation and Analysis of Results

In order to assess the effect of the development of students' prereading skills, teacher researchers compiled data from the initial Pre-Reading Behavior Checklist and from the TALS and compared it to posttest results. Students who moved during the intervention are not included in these in those results.

As indicated in Chapter Two, only four of the prekindergarten students were old enough to be assessed using the TALS. All four of the students reflected gains in their

prereadiness skills for kindergarten. In posttesting, two of the students (aged 5-0 and 5-1) scored at Level Two which indicates prereadiness skills were progressing but not mastered and would be considered in the average range of development for their age. A third student (aged 5-1) scored at the low end of Level Three which indicated the student had mastered the prereadiness skills for kindergarten. This score is also considered within the average range of development. The fourth student (aged 5-7) scored at Level Four, and showed mastery of skills at the kindergarten level and readiness for basal reader instruction. In conclusion, the data indicated that all students demonstrated age appropriate or above readiness skills compared to the performance criteria for children just before or immediately after entering kindergarten.

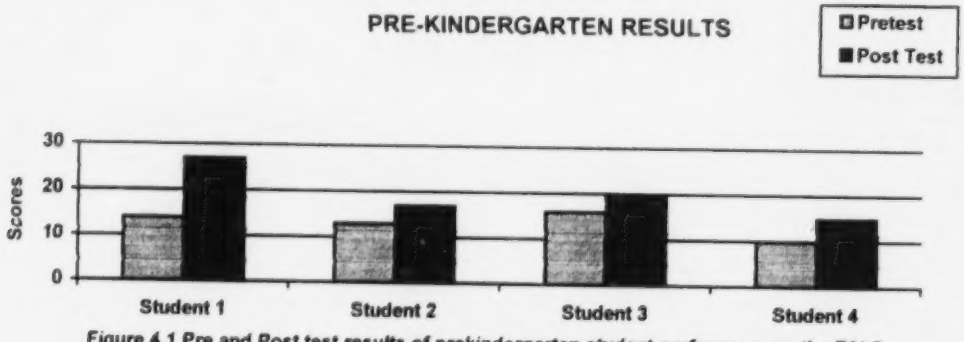

Figure 4.1 Pre and Post test results of prekindergarten student perfomance on the TALS

Students one through seven will enter kindergarten in the fall. The remaining five students will return to the prekindergarten program. The students were posttested only on the eight sounds taught during the intervention. Individual assessment of pre and post test results shows that all students showed an increase in their ability to name letters with the exception of one. In pretesting, none of the children could give the sounds for the letters. Posttesting revealed that four of the students could give all eight of the sounds and hand signals that had been introduced. Credit was given if the student produced the sound

when shown a letter. Though student number eight would not name any letters or sounds, when shown a hand signal, the student identified five of the eight sounds. This student has a moderate speech and language delay with expressive processing difficulty. Additionally, the students who identified less than eight sounds could give either the hand signal when the sound was given or identify the sound when they saw the hand signal.

The following table compares the number of letters and sounds students identified in pre and post testing using the Pre-Reading Student Behavior Checklist.

Table 4-1.

Comparison of Prekindergarten Pre and Post Test Results of Individual Letter and Sound Identification.

STUDENT	UPPER CASE PRE/POST		LOWER CASE PRE/POST		SOUNDS PRE/POST	
1	26	26	18	26	0	8
2	0	4	0	0	0	2
3	26	26	20	26	0	8
4	9	19	6	13	0	8
5	8	22	3	14	0	2
6	7	14	3	10	0	6
7	26	26	2	26	0	8
8	0	0	0	0	0	0
9	18	18	13	18	0	6
10	3	13	3	7	0	1
11	1	2	0	3	0	0
12	21	26	15	23	0	6

In pretesting on the Pre-Reading Behavior Checklist, three of the twelve children recognized rhyming pairs. Two additional children showed an increased ability to recognize rhyming pairs in posttesting. Three of these five children were able to produce a word to rhyme with a given word in posttesting. In pretesting none of the children could

produce rhyming words. When the children were informally assessed on rhyming using the cloze strategy, all of the children could fill in rhyming words left out in a familiar rhyme or finger play. For example, Jack and Jill went up the _____. Additionally, all of the children were able to retell a familiar story using pictures when assessed at posttesting, whereas in pretesting seven of the children just described the pictures.

The prekindergarten children were assessed informally for their ability to recognize syllables in words throughout the intervention period and at posttesting. All of the children could blend compound words, for example, when they heard pan-cake they could respond pancake. All of the students could segment syllables in compound words by clapping them with 100% accuracy except for one child who could clap the syllables with 50% accuracy. Eight of the twelve children clapped three and four syllable words with 100% accuracy. One child clapped the multisyllable words with 80% accuracy and another child clapped with 50% accuracy. The other two children clapped multisyllable words with a model.

All kindergarten students showed an increase in their phonemic awareness as indicated on the TALS. The average increase for the nine students was 10.8 points. While seven students continued to fall in the low performance category with scores below 18, two students fell within level 4 on the performance criteria, signifying readiness for basal reading instruction.

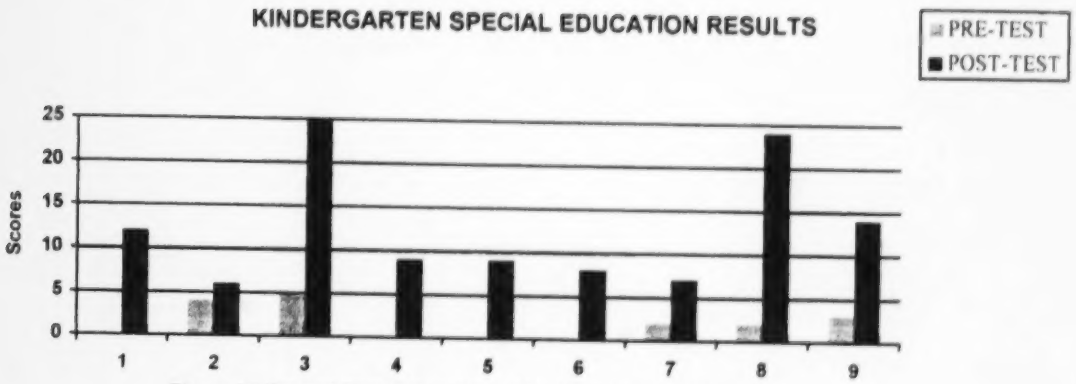

Figure 4.2 Pre and Post test restults of kindergarten special education students performance on the TALS.

Part A of the TALS observed the child's ability to break sentences into individual words. Due to auditory memory and processing deficits, students had difficulty repeating sentences with more than seven words. This impacted their performance on this subtest.

Part B of the TALS screening, which can be administered and scored optionally for students 5-7 and older was not counted in the final individual scores but pre and post tested for diagnostic purposes. This part of the test observed the students ability to identify parts within single words (syllables). All students demonstrated growth in this area with 44% scoring a perfect ten points and no students scoring below a seven.

Part C of the TALS asked the student to segment words into individual phonemes. Four students were able to segment words with two phonemes but not three. The remaining five students demonstrated emerging skills by segmenting onset and rhyme. (c/uf rather than c/u/f). Auditory discrimination and memory deficits appear to cause lower scores on this subtest. For example, when given the word wave the child segmented w/a/z.

The following figure compares the pre and post test results of letter and sound identification. The kindergarten students were posttested only on the thirteen letter sounds presented during the intervention.

Table 4-2

Comparison of Kindergarten Pre and Post Test Results of Individual Student Letter and Sound Identification.

STUDENT	UPPER PRE/POST		LOWER PRE/POST		SOUNDS PRE/POST	
1	0	13	0	13	0	13
2	4	13	4	13	0	13
3	8	13	3	13	0	13
4	0	6	0	6	0	11
5	0	1	0	2	0	3
6	2	9	2	10	0	12
7	5	12	1	11	0	11
8	0	13	0	13	0	13
9	0	12	0	12	0	13

All students showed gains in letter and sound identification skills. Four students identified all letters and sounds covered. It is interesting to note that of the remaining five students, four identified more letter sounds than letter names.

Student number 5 made very little gain in letter sound identification. This student has a visual impairment and significant delays in all areas of development. However, this student has shown an increase in phonemic awareness through the ability to rhyme and blend and segment cvc words.

Pretesting data from the Pre-Reading Student Behavior Checklist revealed that the kindergarten students were unable to produce a rhyming word for a given word. Posttesting results indicated that all students could produce two or more rhyming words for a given word at least five out of six trials. Two students demonstrated the need for

continued instruction as each limited their responses to only two beginning sounds. For example, bat: lat, fat; dog: log, fog; sad: lad, fad. Results from the TALS indicate that five of the nine first grade students scored a 24 or above and are ready for basal reading instruction. All other students scored in the average range indicating an approaching readiness for formal reading instruction. The average increase in scores was 8 points.

The next figure shows the results of the pre and post testing TALS data collected in the first grade class.

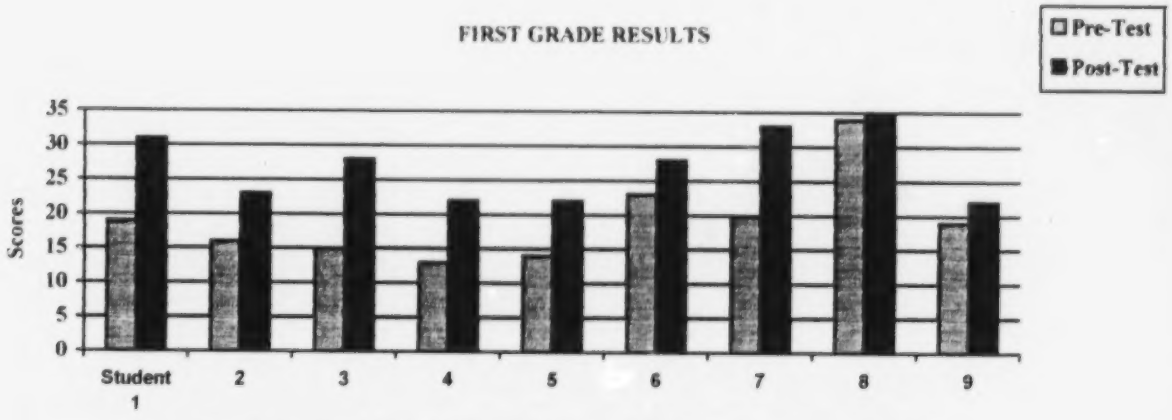

Figure 4.3 Pre and Post test results of first grade students performance on the TALS.

The Pre-Reading Student Behavior Checklist indicated in September that all students identified all upper case and at least 22 of 26 lower case letters. At posttesting, all students identified all letters.

The figure below describes the pre and post test results of students' letter and sound identification skills.

Table 4-3

Comparison of First Grade Pre and Post Test Results of Individual Student Letter and Sound Identification

STUDENT	UPPER CASE PRE/POST		LOWER CASE PRE/POST		SOUNDS PRE/POST	
1	26	26	26	26	23	26
2	26	26	26	26	19	26
3	26	26	26	26	22	24
4	26	26	26	26	16	24
5	26	26	24	26	19	24
6	26	26	26	26	21	23
7	26	26	22	26	20	23
8	26	26	26	26	21	22
9	26	26	24	26	23	26

In posttesting, all students showed increased sound identification. As a result, the teacher researcher observed improved achievement in word recognition, decoding, and spelling skills. Additionally, all students could tell a story from pictures, identify rhyming pairs, and create a rhyming word for a given word.

Conclusions and Recommendations

By analyzing the data, teacher researchers saw that the intervention strategies increased the phonemic awareness and prerequisite reading skills of the students at each site. Well planned explicit instruction times were central to the success of this intervention within the context of existing curriculum. Daily routine and repetition enabled students to automatically process and transfer learned skills.

Teacher researchers agree that addressing the various learning modalities of students was key to the intervention. Kinesthetic activities, especially the hand signals, provided students an additional way to process information. Students were observed in

the first grade classroom spontaneously using hand signals as they decoded and wrote spelling words.

Targeting a sound heard in a word and giving that sound a kinesthetic movement before attaching it to something visual (a letter), placed emphasis on sound/letter recognition rather than letter identification. Kindergarten students who could not identify letters due to processing and memory deficits were observed identifying and writing the sounds and letters heard in words by using the hand signals. In other words, if the teacher researcher instructed the student to write the beginning sound heard in the word bat, the student said the sound /b/ along with the hand signal and then wrote b. However, when shown, letter b on a flashcard or in a word, the student would be unable to say "b", but would say /b/ and use the hand signal. This fact leads teacher researchers to predict that students having difficulty with letter identification skills can learn to read if strategies that address learning modalities are used to provide a strong recognition of the relationship between sound and letter. Teacher researchers also conclude this strong relationship between sound and letter appears to be just as crucial to future reading success as the ability to identify letters.

The kindergarten year, when letters and sounds are typically introduced, appears to be the optimal time to implement explicit instruction in phonemic awareness. However, teacher researchers conclude it is important that children have phonemic awareness opportunities prior to entering school to build a foundation for formal instruction. Continued phonemic awareness instruction in first grade ensures that students maintain skills to facilitate the development of the reading and writing process.

Another factor contributing to the success of this intervention, was that students were actively engaged in their learning. Students looked forward to robot time each day and embraced the various fun and enjoyable activities even though lessons were highly structured and at times repetitious.

Suggestions for revisions to this action research project would include: simplifying the How Does Your Child Learn? survey by having parents choose the description that most fits their child rather than having them rank the descriptions. The teacher researchers suggest that it might be necessary to meet with parents individually to fill out the two home surveys to clarify instructions and to assist those who may not read.

The Pre-Reading Behavior Checklist should be changed to include a rubric to assess retelling a story. Criteria needs to be included to assess rhyming skills. In addition preassessment in the prekindergarten would include clapping one, two, and three syllable words a few weeks after the children have had some experience clapping out their names and compound words.

Other modifications recommended would include using picture word cards that the students are familiar with. Some of the words used in this project were unfamiliar to the children, such as *cuff, yap, maze*. The students had difficulty learning these words which caused confusion in the blending and segmenting activities. In the prekindergarten class, it is recommended that the picture cards be used to introduce awareness of initial sounds, and limit blending and segmenting to just onset and rhyme.

Teacher researchers in all three of the sites felt the intervention was beneficial to all of the students and will continue to implement and develop the strategies.

Lengthening the intervention period to encompass the entire school year would most likely maximize student gains.

Prior to this action research project, we taught letters and sounds within the context of a whole language philosophy. We had no idea how important it was for children to be able to manipulate the sounds in language, how crucial those skills are for future reading success, nor how to use the teaching strategies needed to develop the skills for phonemic awareness.

It is highly recommended to future researchers to use hand signals to teach letter sounds. The hand signals physically involved the students and provided them with a way to take an abstract concept and make it more concrete. Using this strategy enabled students to *hear the sounds, feel the sounds, and see the sounds in words.*

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APPENDICES

APPENDIX A

ASSESSMENTS

CHECKLISTS

SURVEYS

RECORD SHEET

Sawyer's Test of Awareness of Language Segments

For Ages 4 yr. 6 mo. and Older

Child _____ Classroom _____

Birthdate _____ Age _____ Test Date _____

Part A: Sentences-to-Words

1. a.	Mother called.	[+] [−]
b.	I fell.	[+] [−]
2. a.	Go home, John.	[+] [−]
b.	Father works hard.	[+] [−]
3. a.	Tomorrow is my birthday.	[+] [−]
b.	Will you help me?	[+] [−]
4. a.	Let's play a game together.	[+] [−]
b.	When does the bus leave?	[+] [−]
5. a.	What time does the program start?	[+] [−]
b.	I can ride a bicycle fast.	[+] [−]

(End testing for Part A here for ages 4 yr. 6 mo. to 5 yr. 6 mo.)

6. a.	The weather report said it will rain.	[+] [−]
b.	Our cat just had five little kittens.	[+] [−]
7. a.	Dad and Mom went to the store together.	[+] [−]
b.	Uncle Bill flies a kite every Saturday afternoon.	[+] [−]
8. a.	It rained so hard that we couldn't go home.	[+] [−]
b.	Bill and Beth were happy to play the game.	[+] [−]
9. a.	Mary didn't go to school today because she was sick.	[+] [−]
b.	Bob always walks his dog in the park after school.	

Total Part A _____

(Total = number of correct responses *plus* number of (b) items where (a) was correct and (b) was therefore not tested.)

Part B: Words-to-Syllables *(Optional for ages 5 yr. 7 mo. and beyond)*

1.	popcorn (pop-corn)	[+] [−]	6.	tomorrow (to-mor-row)	[+] [−]
2.	banana (ba-na-na)	[+] [−]	7.	window (win-dow)	[+] [−]
3.	rabbit (rab-bit)	[+] [−]	8.	telephone (tel-e-phone)	[+] [−]
4.	classroom (class-room)	[+] [−]	9.	football (foot-ball)	[+] [−]
5.	tiny (ti-ny)	[+] [−]	10.	baby (ba-by)	[+] [−]

Total Part B _____

Part C: Words-to-Sounds

1.	leaf	/lif/	(l-e-f)	[+] [−]
2.	dough	/doo/	(d-o)	[+] [−]
3.	pen	/pɛn/	(p-e-n)	[+] [−]
4.	wave	/weiv/	(w-a-v)	[+] [−]
5.	skate	/skeit/	(s-k-a-t)	[+] [−]
6.	sight	/sait/	(s-i-t)	[+] [−]

(End testing for Part C here for ages 4 yr. 6 mo. to 5 yr. 6 mo.)

7.	bought	/bɔt/	(b-o-t)	[+] [−]
8.	sew	/soo/	(s-o)	[+] [−]
9.	head	/hɛd/	(h-e-d)	[+] [−]
10.	rough	/rʌf/	(r-u-f)	[+] [−]
11.	tea	/ti/	(t-e)	[+] [−]
12.	fume	/fjum/	(f-u-m)	[+] [−]
13.	mule	/mjul/	(m-u-l)	[+] [−]
14.	note	/noot/	(n-o-t)	[+] [−]
15.	plan	/plæn/	(p-l-a-n)	[+] [−]
16.	cuff	/kʌf/	(c-u-f)	[+] [−]
17.	lamp	/læmp/	(l-a-m-p)	[+] [−]
18.	wrong	/rɔŋ/	(r-o-ng)(r-o-n-g)	[+] [−]

Total Part C _____

Total Test Score _____

Pre / Post

Child's name:_____ Date:_____

Pre-reading Student Behavior Checklist

	yes	no
1. Holds a book upright and turn the pages from front to back.		
2. Looks at the left page first.		
3. Tells a story from pictures in a book.		
4. Identifies rhyming words from a group of words.		
5. Produces a rhyming word for a given spoken word.		

Capital letter recognition:

A B C D E F G H I J K L M N O P Q R S T U V W

X Y Z

Lower case letter recognition:

a b c d e f g h i j k l m n o p q r s t u v w

x y z

Letter sound recognition:

a b c d e f g h i j k l m n o p q r s t u v w

x y z

Notes:

How Does Your Child Learn?

Rank your child from the most to the least by using 1, 2, and 3.
1....they do this most often. 2....they do this sometimes. 3....they do this least often

A. When playing, my child:	__likes details and colorful things, looks at objects and moving things.	__likes to talk, prefers toys that make sounds.	__likes to move, climb, jump, use tools; prefers toys with moving parts.
B. During mealtime my child:	__eats food that looks good first, sorts by color.	__talks instead of eating, takes a long time to eat.	__squirms in chair, may get up and down; often puts too much in mouth.
C. When reading or being read to my child:	__is interested in pictures, wants to see pages.	__is concerned with sounds, asks questions.	__prefers turning pages, handling the book; sits for a short time.
D. When counting, my child:	__likes to see objects being counted.	__counts aloud, may make a song of counting.	__counts on fingers. Likes to touch objects as counted.
E. When I scold my child he/she:	__looks away, cries.	__cries or whines, explains away fault.	__doesn't listen; avoids scolding by doing something.
F. In more formal leaning (coloring, workbooks) my child:	__tries to stay in lines, uses many colors, wants things to fit in spaces.	__asks questions, talks during work.	__works rapidly, eager to get to next page, does not stay in lines.
G. In group situations, my child:	__tends to be quiet, watches before joining the group.	__raises voice, talks at the same time as others.	__either is first or last in line; can't wait to get moving.
H. When angry my child:	__uses silent treatment, may become teary-eyed, will not look at me.	__shouts, whines.	__reacts physically, clenches fist or strikes out.
I. I can tell when my child is happy by:	__looking at his/her face.	__by the sound of his/her voice.	__body movement.
J. When looking for encouragement or reward my child:	__looks for a smile, must have me see what he/she has done.	__Needs to be told he/she has done a good job.	__needs a hug, a pat on the back.

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Name:_____ **Date:** _____

Reading at Home Survey

Please mark the one that applies to you and your child.

1. I read to my child:
   every day | 2-3 times a week | less than once a week

2. How many children's books do you have at home?
   less than 10 | 10-20 | more than 20

3. Does your child ask to be read to?
   often | sometimes | never

4. Does your child notice familiar words like K-Mart, McDonald's, or Cheerios?
   yes | no | I haven't noticed

5. Does your child look at a book by herself/himself?
   often | sometimes | never

6. Does your child talk about the pictures in a book?
   yes | no | I haven't noticed

7. Do you and your child go to the library (at school or public)?
   often | sometimes | never

8. Does your child scribble?
   yes | no | I haven't noticed

9. Does you child draw and describe what he/she has drawn?
   yes | no | I haven't noticed

10. Does your child try to write his/her name?
    yes | no | I haven't noticed

ASSESSMENT WEEK OF_____

Name	Rhyming								Letter/sound recognition			
	Create Rhyme			Tell whether 2 words rhyme					Name letter from sound/ hand signal		Name sound from letter	
											Capital	Lower case

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BLENDING / SEGMENTING SOUNDS IN WORDS

NAME	Blending					Segmenting					COMMENTS
	Compound Words	2 / 3 syllable words	Onset / rhyme C - AT	2 phonemes C - A	3 phonemes C - A - T	Compound words	2 / 3 syllable words	Onset / rhyme C - AT	2 phonemes C - A	3 phonemes C - A - T	

DELETION

NAME	Compound Words 1st/last (Cowboy w/o Cow / boy)	2 Syllable Words (Cactus w/o Cac / tus)	In syllables 1st/last ca w/o "k"/"a"	Sounds in words 1st / last cat w/o "k"/"t"	COMMENTS

APPENDIX B

INTERVENTION SCHEDULES

SAMPLE LESSON PLAN

HAND SIGNALS

Prekindergarten Intervention Schedule

(Class met on Mon., Tues., Thurs., & Fri.)

Week of:	Activities:
Sept. 8.	Intro Hickety Pickety name rhyme, clapped & said syllables; read Jump Frog Jump, title reoccurs throughout repetitive text, clapped words each time. Began checklist and TALS.
Sept. 15	Continued pretesting and name rhyme. Pointed out rhyming words in Boa Constrictor chant. Used cloze as they learned the rhyme, children filled in the rhyming word.
Sept. 22.	Taught the Listening Song and brainstormed listening rules for circle time. Intro Rachel the Robot & robot talk, he-lo Ke-vin. Children blended. Environmental sounds record & pictures. Listening Walk story, went for a walk, listed sounds. Animal sounds record & pictures. Sharing Day brought something that makes a sound. Jack & Jill, listed words that rhyme with Jill.
Sept. 29.	Intro 2 syllable compound words, children echoed & clapped; robot talk (segmented compound words) modeled blending. Rhyming songs, chants, nursery rhymes, & fingerplays daily throughout intervention...used cloze for rhyming words as the children became familiar with the words.
Oct. 6.	Continued segmenting & blending compound words. Began *Bear* stories by Frank Asch (Moongame, Mooncake, etc.) Pointed out the compound word titles, clapped. Listed words that rhyme with bear. Conference Th & Fri.
Oct. 13.	Intro B, hand signal & sound, cvc pictures. Listed children's names that began with B. Segmented cvc picture words using robot talk & modeled blending, children echoed. Reviewed bear rhyming words.
Oct. 20.	Continued blending and segmenting B cvc words, children took turns saying the words and feeding the robot. Tried rhyming discrimination...gave word pairs, (bear, chair; bear, mat) do they rhyme?
Oct. 27.	Intro Willoughby Walloughby (Raffi record) recognizing names in rhyme (Wevin, Wyle) Surprise bag with pumpkin in it. Intro P, hand signal, sound. List of last names with P. P bombardment words.
Nov. 3.	Intro P cvc words, blended & segmented. Pumpkin stories. 1,2 Buckle My Shoe. Made up rhyming words for pig.
Nov. 10.	No school M & T, parent conferences & holiday. P compound words (2& 3 syllables), clapped, blended, & segmented. P & B cvc words with robot. Listened for the difference in sound.

Nov. 17.	Mouse stories. Intro M., hand signal, sound, cvc picts., blended, & segmented/robot, list of children's names with M. Learned mouse poem *Please*. Sorted M and P picture cards by sound to initial letter using robot.
Nov. 24.	3 syllable compound words, clapped, segmented, blended. Reviewed M. Discriminated M & B sounds. Poem *Mice*. Thanksgiving break.
Dec. 1.	Intro S (same as above) Read Six Snowy Sheep. Made a list of S names, S words heard in book. Workshop TH., Fri.
Dec. 8.	Intro T (as above) 10 Tiny Trees flannel board rhyme. Rhyming word pairs for tree. Poem excerpt House is a House for Me. Wrote 3, 4, & 5 word sentences, highlighted each word, clapped the words together. Discriminated S, T words.
Dec. 15.	Reviewed letters, sounds, and hand signals. Blended and segmented various cvc picture words and identified initial sound and letter, verbally. Hickety Pickety with winter words.
Jan. 5.	Sick M. T. snow day Th. Reviewed letters and sounds.
Jan. 12.	Intro F. Read Ten Flashing Fireflies. Workshop Th, F.
Jan. 19.	Intro C. Have You Seen My Cat? Rhyming word list for cat. Discriminate rhyming pairs. Discriminate F & C words.
Jan. 26.	Intro. D. Ten Little Ducks. Willoughby Wallaughby using common objects (W. W. sat on a wable, sat on a wesk) children guess the real word.
Feb. 2.	Reviewed all letters, hand signals, & sounds. Discriminated D & C words. Gave 3 word sentences. Children echoed and clapped, then echoed and jumped the words.

Kindergarten
Schedule of Sounds Introduced

Week	Sound	Theme/ Target word
8/26		All About Me(Senses)
9/2		All About Me(Senses)
9/8		Environmental Sounds
9/15	M	Mud
9/22	F	Farm/Fun
9/29	A	Farm/Fat
10/6	N	Fall/Nut
10/13	S	Fall/Six
10/2	U	Review/Mud,Nut,Fun,Sun
10/27	W	Spiders/Web
11/3	B	Insects/Bug
11/10	T	Nutrition /Ten
11/17	L	Thanksgiving/Look
2/1	G	Candy/Gum
12/8	Review	Christmas
12/15	Review	Christmas
1/5	H	Occupations/Hat
1/12	Review	Occupations/Hat
1/19	D	Family/Dad

First Grade
Schedule of Sounds Introduced and Reviewed

Week	Sounds
9/8	B/A
9/15	T/E
9/22	D/L/I
9/29	G/N
10/6	O/P
10/15	W/U
10/20	U/M/R
10/27	Y/C
11/3	C/F
11/17	S/K
12/1	Q/H
12/8	X/J
12/15	Z/V
1/5	Ch/Sh
1/12	Sh/Th
1/21	Qu
1/26	Qu/Wh

Blending Lesson Plan

Introduce lesson using the following poem:

Make one eye go wink, wink, wink.
Make two eyes go blink, blink, blink.
Make two fingers stand just so.
Then ten fingers in a row.
Stretch and make a yawn so wide.
Now bring your arms down to your side.
Close your eyes and hear me say,
Our very special sound today - / m /

Have students repeat words from bombardment list and or objects collected with the / m / beginning sound.

Introduce the robot words in the following way:

This a picture of a man. People say "man". The robot says "m--an"(using the m hand signal as you say / m / and then "an". After students have mastered this blending task begin segmenting 3 phonemes - m--a--n, using all hand signals.
Continue in this manner until all words have been introduced. Attach the picture card of the man to the robot.

Students blend -

Have one student come up to the robot. Say to the student " The robot says m--an, what do people say? The student blend the sounds together --man. Then the picture card is fed to the robot. Repeat until all students have had a turn.

Adaptations -

If a student is having difficulty, get something visual to point to as you segment the word , such as pop cans covered with construction paper or use magnetic letters in this manner:

m an push together man or m a n push together man

Segmenting

Sementing words is accomplished in much the same way. Only this time the teacher says the word "man" and the students are asked to respond in robot talk "m---a---n " using the hand signals. The picture is fed to the robot.

Consonant Trading Cards

Name _____

Use these cards to teach consonants and their hand signals. Use the picture symbols as added cues for teaching consonant sounds. Descriptions of hand signals are in Appendix B.

P p	B b	M m	T t	D d
K k	G g	F f	V v	H h

Consonant Trading Cards

Name _____

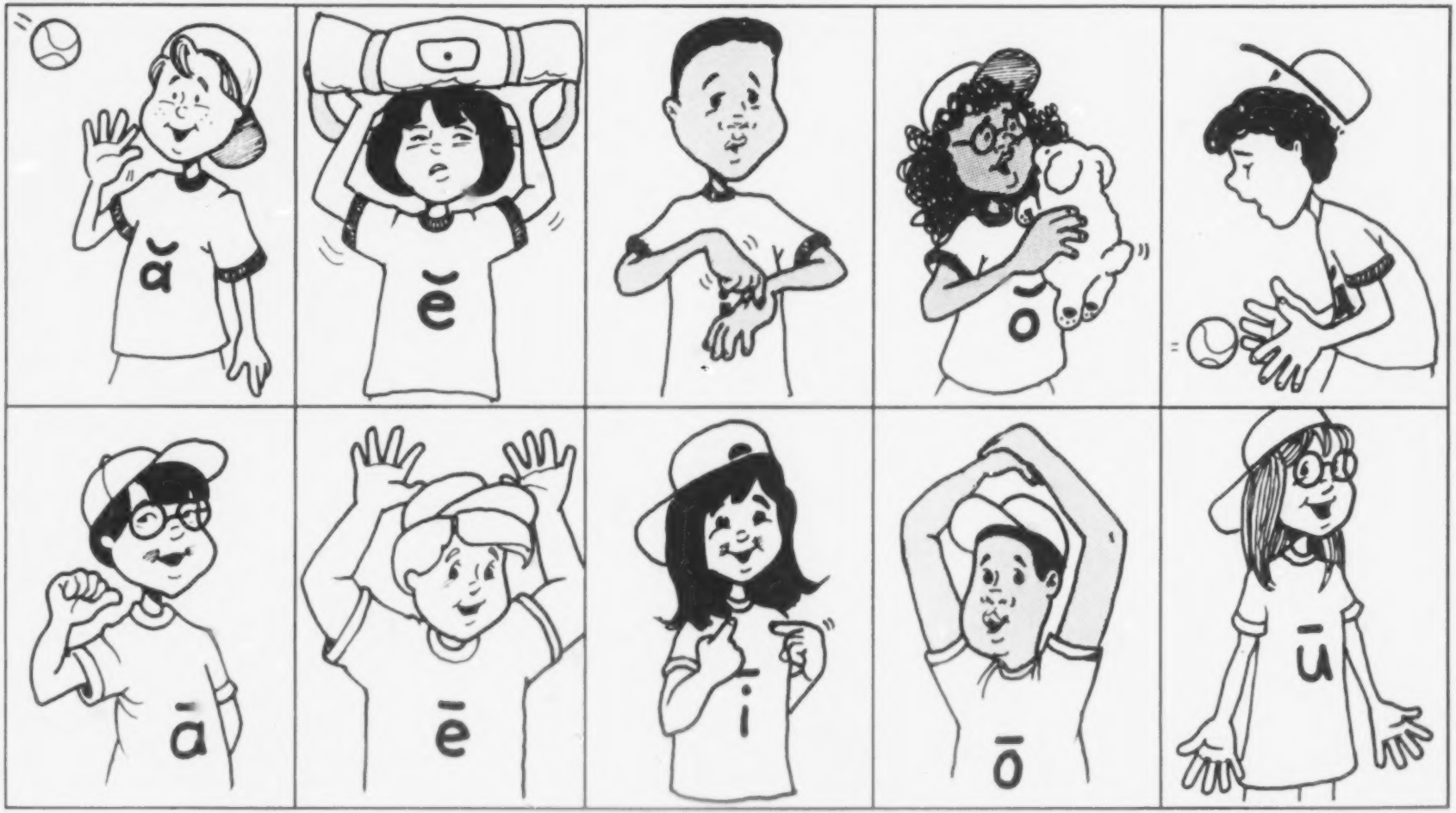
Use these cards to teach consonants and their hand signals. Use the picture symbols as added cues for teaching consonant sounds. Descriptions of hand signals are in Appendix B.

L l	R r	N n	Sh sh	Ch ch
J j	S s	Z z	W w	Y y

Vowel Trading Cards

Name _____

Use these cards to teach vowel sounds and their hand signals. Descriptions for the hand signals are in Appendix B.



APPENDIX C

INTERVENTION ACTIVITIES

Literature - M Sound – Kindergarten

Shared book - Mrs. Wishy Washy by Joy Cowley
Published by The Wright Group

Other literature - The Piggy in the Puddle by Charlotte Pomerantz
Published by Macmillan Publishing Company

Sheep in a Jeep by Nancy Shaw
Published by Houghton Mifflin Company

Mud by Wendy Cheyette Lewison
Published by Random House

Annie and the Mud Monster by Dick Gachenbach
Published by Lothrop, Lee & Shepard Books

Mud Pies by Judith Grey
Published by Troll Associates

How to Make a Mud Pie by Rozanne Lanczak Williams
Published by Creative Teaching Press

Activities - M Sound – Kindergarten

Mud picture - mix up a batch of mud, fingerpaint and write in it.

Mud Puddle Song - Sung to *Here We Go Round the Mulberry Bush*

What is in the mud puddle, the mud puddle, the mud puddle
What is in the mud puddle , the mud puddle today?

Hide an object in the mud puddle - play 20 questions

Make mud pies in foil cupcake liners. Decorate!

Brainstorm pie flavors on a web. Graph favorite pies.

Begining M Sound - Bombardment Word List

machine	mad	made	magic
magnet	mail	male	man
many	map	marble	march
mark	marry	marshmellow	mask
match	mattress	maybe	meadow
meal	mean	measure	meat
medicine	melt	men	message
metal	microscope	middle	mile
milk	million	minute	mirror
miss	mix	Monday	money
monkey	monster	month	moon
morning	mosquito	most	mother
motor	motorcycle	mountain	mouse
mouth	movie	mud	muscle
museum	music	mustard	

Ending M Sound - Bombardment Word List

arm	blossom	bottom	broom
calm	climb	come	costume
cream	dam	dime	dream
drum	farm	flame	game
gym	ham	lamb	name
palm	poem	problem	rhyme
same	some	swim	tame
team	thumb	time	warm

(maze)

(mail)

(mom)

(man)

(mud)

(map)

Robot Pictures - Mm

M

(same)

(lamb)

(game)

Robot - Pictures - M

(jam)

(dime)

(name)

Name _____ Skill: Color, cut and paste in order.

A Mud Bath

© Frank Schaffer Publications, Inc.

FS-32013 Preschool Activities

Author unknown. Preschool Activities. Frank Schaffer Publications, Inc., 1995

262 The Farm

3. Draw two small triangles at the top of the circle.
4. Draw a small circle in the center of the large circle.
5. Draw two tiny circles side by side, in the small circle.
6. Draw two big dots above the small circle.
7. Color the pig.

MUSIC - MOVEMENT - GAMES

Song - "The Pigs in the Mud"

Tune: "The Wheels on the Bus"

The pig in the mud goes squish, squish, squish,
Squish, squish, squish,
Squish, squish, squish,
The pig in the mud goes squish, squish, squish
Down on the farm.

The little baby pigs say "Let us in!"
"Let us in!"
"Let us in!"
The little baby pigs say "Let us in'"
Down on the farm.

The pig in the mud says "Be my guest,"
"Be my guest,"
"Be my guest."
The pig in the mud says "Be my guest,"
Down on the farm.

The little baby pigs jump, plop, plop, plop,
Plop, plop, plop,
Plop, plop, plop;
The little baby pigs jump, plop, plop, plop,
Down on the farm.

The pigs in the mud go squish, squish, squish,
Squish, squish, squish,
Squish, squish, squish,
The pigs in the mud goes squish, squish, squish
Down on the farm.

The Everything Book by V. Indebaun, M. Shapiro
? 1985, Page 160.

Literature - W Sound - Kindergarten

Shared book - The Very Busy Spider by Eric Carle
Published by Philomel

Other literature - Be Nice to Spiders by Margaret Bloy Graham
Published by Harper Collins

Little Miss Muffet - nursery rhyme

Spiders and Their Webs by Fred and Jeanne Biddulph
Published by The Wright Group

Spiders Are Animals by Judith Holloway and Clive Harper
Published by Modern Curriculum Press

The Itsy Bitsy Spider by Ira Trapani
Published by Scholastic, Inc.

Anansi the Spider by Gerald McDermott
Published by Henry Holt

Activities - W Sound - Kindergarten

Make spider webs on black paper using white glue.

Dramatize Little Miss Muffet

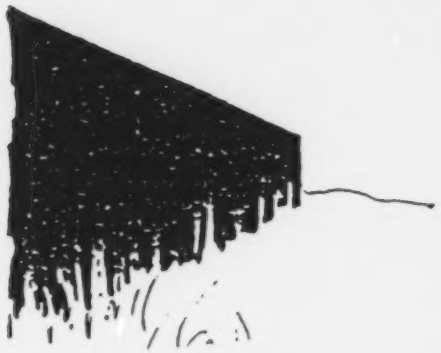
Catch a spider and observe. Catch two and compare and contrast on a venn diagram.

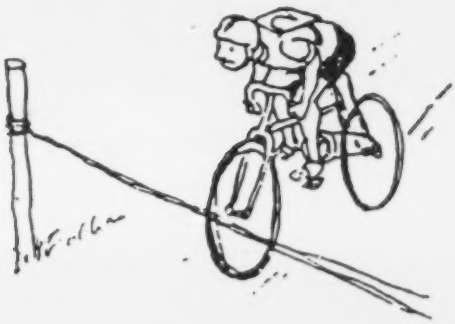
Make a class book entitled The Spider - have each child write The spider is..... (filling in the blank). Illustrate.

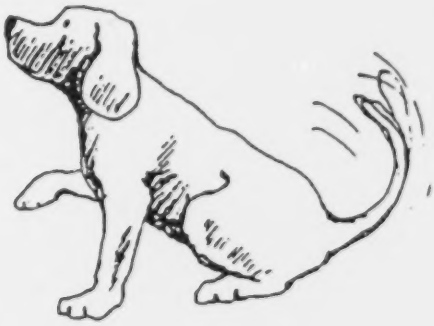
BEGINNING W SOUND - Bombardment Word List

wagon	wait	wake	walk
wall	want	warm	wash
watch	water	wave	wax
way	we	weak	wear
weather	web	Wednesday	week
weight	well	went	west
wet	wide	wife	wild
win	wind	window	wing
winter	wire	wish	with
wizard	wolf	women	won
wonder	wonderful	wood	wool
word	work	world	worm
worry	wag	waist	wallet
wed	weep	wig	witch

Robot Words - W Sound



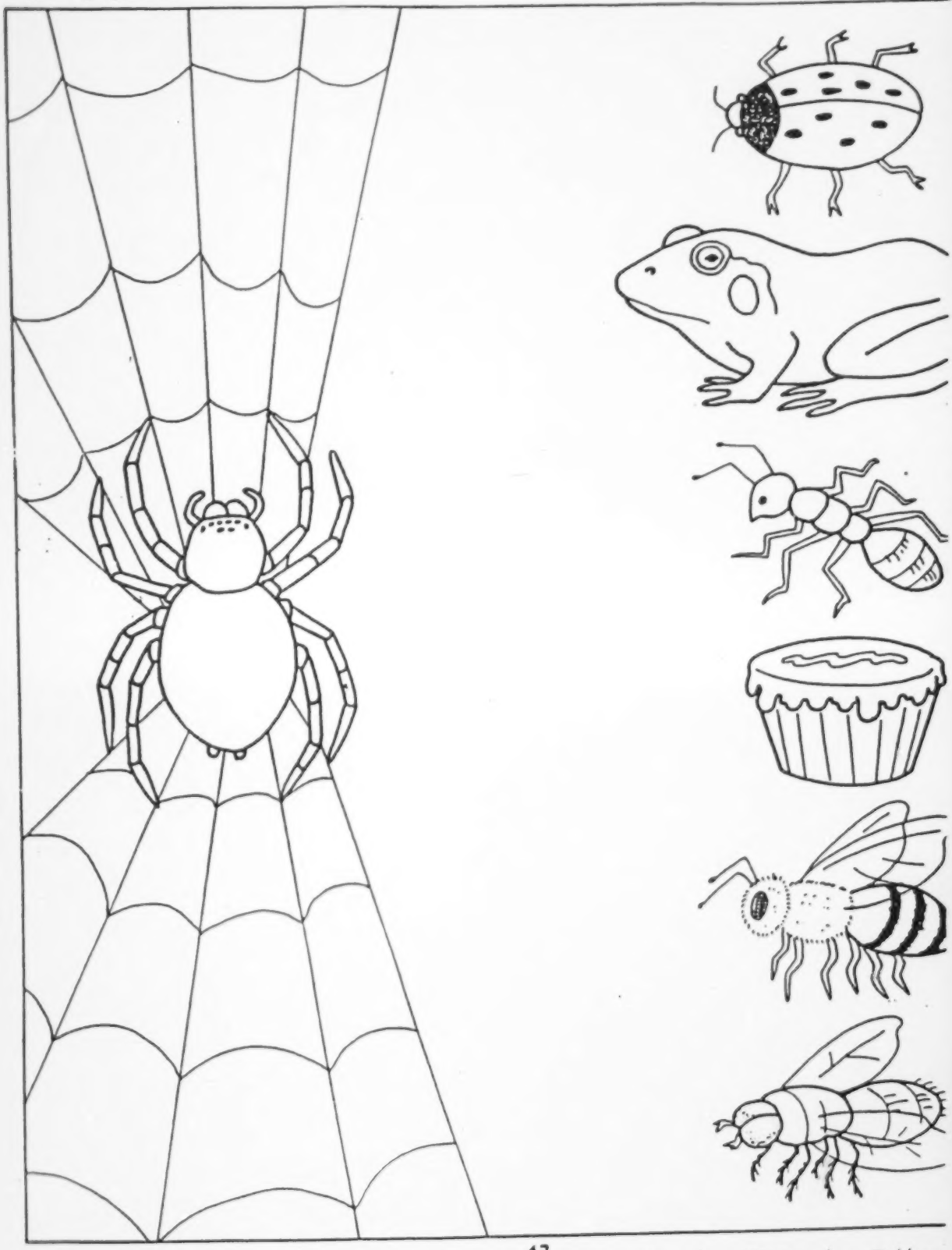




A Spider's Breakfast

Draw a line from the spider to all the things it will eat. Cross out the things it won'

[See page 41.]



Creative Resources for Early Childhood Education by D. Fleming, D Hami
Harcourt Brace Javanovich, 1975

SPIDERS

One Spider Went Out to Play

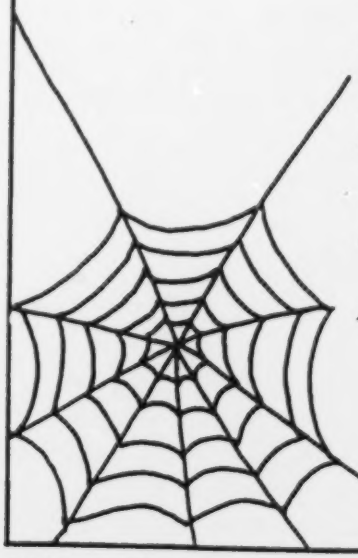
Have the children sit at random on the floor. Recite the following verse as you walk among them.

One spider went out to play,
Out on a spider's web one day.
He had such enormous fun,
He called for another spider to come.

At the end of the verse, choose one child to hook onto your "spider train." Repeat the verse, this time saying "Two spiders went out to play," and choose another child to join the fun. Continue the game until the children have formed one long spider train. Then recite the final verse below and have the children act out the movements described.

All the spiders went out to play,
Out on a spider's web one day.
They had such enormous fun,
They didn't see the web break —
(Clap hands.)
And they all fell down!

Adapted Traditional



Spin, Spin Little Spider

Sung to: "Ten Little Indians"

Spin, spin, little spider,
Spin, spin, wider, wider.
Spin, spin, little spider,
Early in the morning.

Dance, dance, little spider,
Dance, dance, dance out wider.
Dance, dance, little spider,
Early in the morning.

Make your web, little spider,
Make your web, wider, wider.
Make your web, little spider,
Early in the morning.

Jean Warren

Prune Spiders

Give each of the children a large soft prune to use as a spider body. Then let them poke pretzel sticks or crispy Chinese noodles into the sides of their prunes to make legs.

Theme-a-Saurus by Jean Warren
Warren Publishing House, 1989.

Children's Books:

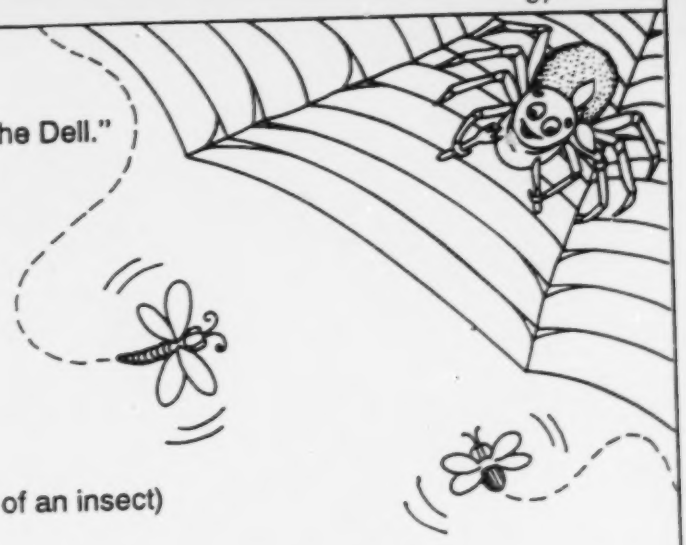
- *The Big Sneeze*, Ruth Brown, (Lothrop, 1985).
- *Spider's Web*, Barrie Watts, (Silver Burdett, 1987).
- *The Very Busy Spider*, Eric Carle, (Putnam, 1984).

Contributors:
Mary Whaley, Kentland, IN
Peggy Wolf, Pittsburgh, PA

Music

"The Spider in the Web"

Sing this song to the tune of "The Farmer in the Dell."



The spider in the web,
The spider in the web,
Spin, spin, oh watch it spin,
The spider in the web.

The spider gets a fly,
The spider gets a fly,
Spin, spin, oh watch it spin,
The spider gets a fly.

The spider gets a _____, (insert name of an insect)
The spider gets a _____,
Spin, spin, oh watch it spin,
The spider gets a _____.

Continue the song with children naming other insects the spider may catch in its web.

Spider Facts to Music

Have the children create new lyrics to the tune of "Mary Had a Little Lamb" using facts they have learned about spiders. This would be a fun cooperative learning group activity. Each group could be responsible for writing a new verse and teaching it to the class.

Black widows are poisonous, poisonous, poisonous,
Black widows are poisonous.
What do you know about spiders?

Wolf spiders hunt for their food, hunt for their food, hunt for their food.
Wolf spiders hunt for their food.
What do you know about spiders?

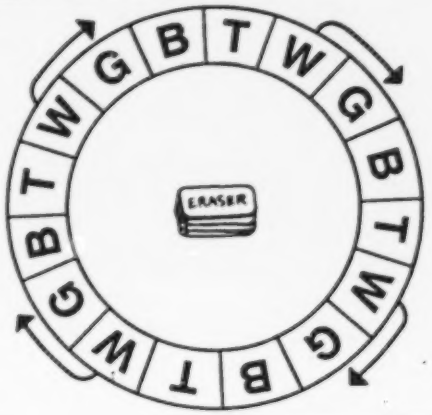
Spiders - Theme Series - Creative Teaching Press, 1995

Caught in the Web

Standing on a large circle children join and raise their hands to make a web. A small group of children (insects) run in and out of the circle. On a signal from the teacher the children forming the web quickly lower their arms. Those students trapped inside the circle become part of the web. When all insects are caught, new ones are chosen.

Spider Race

Students stand on the edge of a large circle and are each given a spider name. Use 3 or 4 different names (black widow, tarantula, wolf spider, garden spider). One student places an eraser in the center of the circle and shouts out one spider name. If "tarantula" is called, all students designated as tarantulas leave their places and run clockwise around the circle. Upon reaching their original positions, they race into the center to grab the eraser. The winner calls the next spider name.



Spider's Web

Children sit in a large circle. Using a large ball of string or yarn, children pass the ball or toss it across the circle to form a web-like design. The children hold onto their ends of the yarn and admire the web they have created. Reverse the spinning of the web in sequence by winding up the ball of yarn. This could also be done in small groups of 5 or 6 children. See which group can spin and rewind a web the fastest.

Name _____ Little Miss Muffet

Little Miss Muffet

FS-02012 Preschool Activities

Preschool Activities. Frank Schaffer Publication, Inc. 1995

Name _____

WHAT'S MISSING?

Date _____

Draw in the missing parts of the picture.

© 1983 by The Center for Applied Research in Education, Inc.

The Center for Applied Research in Education, Inc. 1983
Received from a Collegue - date unknown.

7

LITTLE MISS MUFFET

Little Miss Muffet
Sat on a tuffet
Eating her curds and whey.

Along came a spider
And sat down beside her,
And frightened Miss Muffet away.

Received at an Early Childhood Confence, date unknown.

The spider is

_ _ _ _ _ _ _ _ _ _ _ _ _ _

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First Grade Intervention Activities

Letter People

Students will say the sounds of consonants and vowels. Teacher writes letter sounds on individual pieces of paper and passes letters to students. Teacher says a word and students stand with corresponding letters heard in the word. Other students read the word.

Word list -	**bat**	**gone**	**bee**
	tab	**deal**	**let**
	bet	**cry**	**fly**
	bed	**told**	**tell**

Say - Spell - Say

Students soft clap words three times rhythmically by sounds. Say the word first, say and clap each sound and then repeat the word. Repeat three times.

Word list -	**bike**	**box**	**bus**
	bee	**bat**	**bug**
	bag	**big**	**book**

Stretch and Read

Students will stretch and read new words by segmenting each sound slowly and then blending the sounds into the word.

Quick Erase

Start with <u>bus</u> and finish with <u>bun</u>, changing one letter at time. Words are used in sentences to make sure students recognize them.
bus - bug - big - bag - bat - but - bun

Blending

Students are shown the letters - sh. The two letters together make one sound. Students will blend the sounds together and say the whole word.

Word list - ship splash shelf
shop shock shout
shack shag shell
sheet

Substitute with - wh sound

Word list - when white what
while whip why

Substitute with - th sound

Word list - thin thick thrill
bath math path
throw mouth

Substitute with - ch sound

Word list - chin chair rich
chart chop teach
chap beach much

Substitute with - qu sound

Word list - quiet quit quite
quack queen quick

First Grade - Student Generated Bombardment List
B Sound

bus	bee	bear	box	bunny	ball
bar	bug	but	bud	balance	bubbles
beam	buzz	blue	bolt	boy	bike
balcony	boss	buggy	baby	ballerina	Brittney
Barney	basket	block	bone	Barbara	Berney

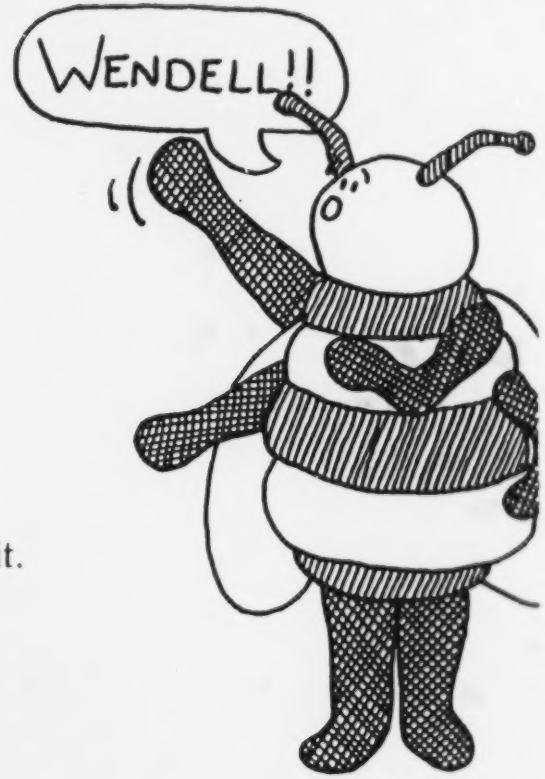
Student Generated Rhyming Words

at	men	log	bug	in
hat	ten	frog	tug	fin
cat	hen	pog	lug	bin
fat	den	dog	dug	tin
sat	pen	fog	jug	pin
mat	pen	hog	rug	win
pat	ben	smog		
that		bog		
rat		jog		

3. Hickety-Pickety Bumble Bee *(Chant)*

All:	Hickety-Pickety Bumble-Bee.
	Who can say his name for me?
Child:	*(Cathy)*
Teacher:	Let's all say it.
All:	Cathy
Teacher:	Let's clap and say it.
All:	Ca-thy *(clap-clap with syllables)*
Teacher:	Let's whisper it.
All:	Cathy *(softly)*
Teacher:	Let's turn off our voices and clap it.
All:	*(clap-clap)*

Repeat chorus and go on to the next child.



Presented at a Early Childhood Conference

Teacher Made Robot